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ANNUAL REPORT

OF THE
SCHOOL MEDICAL OFFICER

TO

The Education Committee

OF THE
SALOP COUNTY COUNCIL

1930.

WILLIAM TAYLOR, M.D., D.P.H.





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Medical Staff.

School Medical Officer :

WILLIAM TAYLOR, M.D., D.P.H.



Assistant School Medical Officers :

KATHLEEN PRIESTLEY, L.S.A.

MABEL BLAKE, M.B., Ch.B.

LESLIE WILSON EVANS, M.B., D.P.H. (part-time).

BERNARD A. ASTLEY WESTON, M.B., D.P.H.

WILLIAM H. HARRIS, M.B., D.P.H. (part-time).

JOSEPH I. E. McCORMACK, M.B., D.P.H. (ceased duty 31st August, 1930).

CHARLES M. NICOL, M.B., D.P.H. (commenced duty 1st November, 1930).

School Dentists :

STEPHEN KEENAN, L.D.S.

FRANK H. BIRCH, H.D.D., L.D.S.

GERALD R. CATCHPOLE, L.D.S.

Organiser of Physical Training :

Mrs. K. W. DAVEY, Diploma of the College of Physical Education.

To the Chairman and Members of the Education Committee.

LADIES AND GENTLEMEN,

I have the honour to present the Annual Report for 1930, which is essentially the same in form as the reports of previous years.

The work of the School Medical Service continues to be developed and extended, and a scheme for the provision of Dental Treatment in Secondary Schools was introduced during the year. The School Dental Officers now visit the secondary schools to inspect the teeth of the children, and treatment is provided for those in attendance who have free places.

I am, Ladies and Gentlemen,

Your obedient Servant,

WILLIAM TAYLOR,

*County Medical Officer and
School Medical Officer.*

COLLEGE HILL HOUSE,
SHREWSBURY,
May, 1931.

AREA COVERED BY THE SALOP EDUCATION AUTHORITY, NUMBER OF SCHOOLS, DEPARTMENTS, AND CHILDREN ON REGISTER.

The area covered by the Salop Education Authority, which at the time of the 1921 census had a population of 211,946, comprises 858,277 acres, and with the exception of the area represented by the Borough of Shrewsbury, which is an independent authority for elementary education, is co-extensive with the administrative county. During the year of 1930 the Priors Lee Mixed and Infants Departments were amalgamated, also the Jackfield Mixed and Infants Departments, and the Oswestry C.E. Junior Boys and Girls Departments. At the end of the year there were 333 departments comprised in 278 schools. On 31st December, 1929, the number of children on the register was 29,637, as opposed to 29,425 on 31st December, 1930.

STAFF.

There are six Assistant School Medical Officers, two of whom hold positions as District Medical Officers of Health within the County, seven-tenths of their time being devoted to the work of School Medical Inspection and three-tenths to Maternity and Child Welfare work.

In addition to the Assistant Medical Officers above mentioned, there are—

- 3 School Dentists.
- 1 Organiser of Physical Training.
- 2 Whole-time School Nurses.
- 10 Health Visitors undertaking school nursing.
- 91 District Nurses undertaking school nursing.
- 3 Dental Helpers.

CO-ORDINATION.

As the School Medical Officer is the County Medical Officer, and as the Assistant School Medical Officers are also the Assistant Child Welfare Medical Officers, this allows of complete co-ordination of the school medical services with the other health services of the County, namely, Child Welfare, Tuberculosis, Mental Deficiency, Venereal Disease, and the work of the District Medical Officers of Health. In the case of the Oswestry Urban and Rural Districts, and the Urban and Rural Districts of Ellesmere, in which County Council Assistant Medical Officers are also the District Medical Officers of Health, a further means for co-operation and co-ordination between the various branches of the health services is provided.

The advantages of the above arrangements become apparent when the work in the various clinics in the County is borne in mind. The same Medical Officers attend both the School Clinics and the Child Welfare Clinics, which are held in the same buildings on the same day. In addition, the Orthopaedic Clinics, although conducted by other than County Council Medical Officers, are also held in the same buildings and at the same time as the Child Welfare Clinics. By such an arrangement those responsible for one branch of the work can readily refer any child to a Medical Officer responsible for another branch, according to the nature of the defect from which the child is suffering. The Assistant School Medical Officers, therefore, have every opportunity of keeping in touch with those children under five years of age, and also with those over that age, who are under the necessity of attending one or other of the various clinics.

The co-ordination with the Tuberculosis Scheme is also very close, and arrangements are in force whereby a child, whose physical condition is such as to render the opinion of a Tuberculosis Officer desirable, can readily be referred to him for examination, and for continued supervision and re-examination, if such is considered necessary or advisable.

By these various arrangements the care of the debilitated children under school age is adequately provided for, especially as the health visitors, who attend the Child Welfare and Tuberculosis Clinics, are also responsible for School Nursing.

HYGIENIC CONDITION OF THE SCHOOLS.

In a county such as Shropshire, in which the population is about equally distributed between Urban and Rural Districts, it naturally follows that there are great differences in the hygienic condition of the schools. The size of the schools varies so greatly, and the means for making provision for sanitation differ so widely with the locality, that nothing like uniformity is obtainable, and in certain instances there is ample room for improvement. Steady progress in this respect is, however, being made, and each year sees advances not only in the provision and improvement of sanitary arrangements and water supplies, but also in the matter of heating, lighting and ventilation. In certain of the older schools the design of the class-rooms is so bad that the distance across is greater than that from back to front, the result being that, if the teacher is to get all the children comfortably within his field of vision, it is necessary to crowd all the desks as far as possible into one-half of the floor-space. Such an arrangement is extremely bad, as it does not permit of proper spacing of the children and is conducive to the spread of infectious disease, which is, as a rule, conveyed from one child to another through the inhalation of air contaminated by infected particles sprayed into the atmosphere as a result of coughing.

Heating and Ventilation.

It is important not only to have adequate spacing of the children, but also to have ample ventilation in order to flush out the vitiated atmosphere and replace it with fresh air, and this can only be obtained if, in addition to proper ventilation, there are also satisfactory means for heating. The problems of heating and ventilation cannot be considered separately, as they are one and the same, and the final solution must always result in a compromise.

Ventilation which promotes a feeling of chilliness by lowering the body temperature depresses the vitality, and is unsatisfactory in that it renders the child susceptible to any infection with which it comes in contact. Warmth which is provided at the expense of adequate ventilation is equally harmful, in that it is obtained by shutting out fresh air, which leads to vitiation of the atmosphere of the class-room and in some instances the loading of it with infective material. The more fresh air a child obtains the better, but the means of heating the school must be such that the debilitated and weakly children can maintain the normal body temperature; otherwise the results are likely to be harmful.

It must be recognised, therefore, that it is practically impossible to provide adequate ventilation unless steps are taken to keep the children comfortably warm, especially if they are underclothed or underfed; and it is difficult to find fault with a teacher who on a cold winter day keeps all the windows closed in an effort to heat the school, when the only means of heating the class-rooms is by means of a fire placed in one corner, especially if the fire-place is of faulty construction.

Open-Air Schools.

The ideal is of course an open-air school, and the Local Education Authority is approaching as near to this as is possible in this country by constructing all new schools on the open-air principle. Doors are placed along one side of each class-room in such a way as to enable the whole of this side of the room to be thrown open to the outside air, and in order to enable these facilities for bringing the children into contact with the open air to be utilised to the fullest extent, special heating arrangements are being installed. It is hoped that in this way not only will an improvement in the general health of the children be promoted, but that there will also be a reduction in the prevalence of infectious disease. It is a lamentable fact that many parents succeed in keeping their children free from serious forms of infectious disease till they begin to attend school, only to find that they then go down with one form of infection after another, sometimes with most unfortunate consequences. If, therefore, the heating arrangements in the schools constructed on the open-air principle are such that the children can be kept warm when the whole of one side of the class-room is thrown open, it is hoped and expected that considerable improvement in the general health of the children will be brought about.

Ceiling Heating.

It must be recognised that at the present time the usual method of heating is one which results in warming the air contained in a room. In an open-air school this principle is of course quite impracticable, if the doors to the outside are to be kept open to any considerable extent. An atmosphere which is continually changing, as will be the case in an open-air school, cannot be a warm atmosphere ; and, if considerations of warmth will not permit of a changing atmosphere in such a school under normal conditions in this country, schools constructed on the open-air principle must to a great extent be considered a failure. It is intended to heat the children rather than the room, and the only practicable way of doing this is to place the source of heat in such a position that the rays of heat will fall directly on them. The principle of ceiling heating has therefore been adopted, and although this method is more or less in the experimental stage, it is confidently expected that the children will be kept warm in the same way as when standing in the rays of a bright sun ; and that they will in addition experience the stimulating effect of breathing and coming in contact with a surrounding cool atmosphere, a most important factor in the promotion of good health and of the natural powers of resistance to disease.

“ Vitaglass.”

The question of the desirability of fitting “ Vitaglass,” or some other form of glass capable of transmitting the ultra-violet rays to a much greater extent than ordinary window-glass, is one which has of recent years been much under discussion. The question is whether the advantages are commensurate with the increased cost, and it is difficult to believe that this would be so in the case of a day school, as the children are only in the class-rooms during a short period every twenty-four hours ; and the open-air principle of school construction having been adopted, this in itself ought to eliminate the necessity for further discussion of the question.

Meals for School Children.

The health of the children is much more likely to be improved by arrangements whereby a really good meal can be provided in the school during the middle of the day, and at the present time the problem of how to do this is being dealt with in individual schools to varying extents by different methods. The number of schools in which a good, hot meal is provided is not large, but in many schools something is being done as a result of the initiative of the head teachers, and full credit and every encouragement should be given to those who try to provide for the needs of the children in this respect. What has been done in the Little Drayton Council School is well worthy of special mention.

In this school about 420 children are on the register, and from 1st October, 1929, to 30th September, 1930, the number of dinners provided was 14,266. Various menus are drawn up to cope with seasonal demands and to vary the meal from day to day. The total cost during the twelve months in question was £133 7s. 6½d., and the amount drawn from the children was £134 7s. 6½d. This covered the cost not only of the dinners but also of the utensils, and the charge for a dinner was 2d. Although the principal items used were 1,628 lbs. of meat and 13,440 lbs. of potatoes, large quantities of fish, greens, fruit, cheese, bread and buns were also provided. Children who wished milk in addition could also have it at a cost of 1d. per third of a pint, and 3,007 pints were used. The arrangements made for serving the dinners and washing up afterwards were excellent.

Cows' Milk and Malted Milk.

In an increasingly large number of schools a regular supply of milk is now being supplied in bottles containing a third of a pint at the cost of a 1d. This is usually consumed in the middle of the forenoon, and, as milk is the very best form of food obtainable, the needs of the children are up to a point met in this way. In a larger number of schools a hot drink of malted milk

can be obtained in the middle of the day. Although this last is all to the good, and many children prefer malted to ordinary milk, it cannot be too clearly stated that fresh, clean cows' milk is infinitely superior. Milk being the most nutritious form of food obtainable, it naturally stands to reason that in malted milk the most important and beneficial constituents are those which are obtained from the cows' milk which is used to make it. The purchase of cows' milk in the form of malted milk is, therefore, a very expensive and uneconomic method of obtaining it.

The Local Education Authority is taking every opportunity of encouraging the consumption of milk by school children, and it is hoped that, if the habit of drinking milk is acquired during school life, it will be continued after the school age has been passed, as, although milk is absolutely necessary for the health of a growing child, it is only a little less important in the case of an adult. While the standard of cleanliness of milk production in this county is gradually being raised, it ought to be stated that, if the consumption of milk is to be encouraged, the farmers must do their utmost to give a sound, clean article in return. Milk is recognised as one of the ways by which tuberculosis can be spread, but the advantages to health of milk consumption far outweigh any risk of disease which might possibly be conveyed in the milk.

Vitamins and Minerals.

For a number of years questions relating to nutrition have to a great extent been expressed in terms of vitamins. It is now time to state that, important as vitamins undoubtedly are, the part which they play in nutrition has been much overstressed. Their importance has been emphasized to the exclusion of the much more important constructive elements. It is the part played by these in milk, more especially by the mineral constituents, which makes it the food of choice above all others; and although its great importance as an article of diet for children is admitted, it is not fully recognised to what its special merits can be particularly attributed. More than a sufficiency of all vitamins known to be necessary for health can be obtained by a daily consumption of a small quantity of cod liver oil, a little yeast and an orange. For a complete supply of the constructive materials so essential to health, these have to be sought for in certain foods such as milk, which provides them all, and in green vegetables, which are specially rich in the mineral constituents. Probably the greatest and most common dietetic defect of the present day, especially in school children, is to be found in the absence from the food of the essential mineral elements.

EDUCATIONAL WORK OF MEDICAL OFFICERS AND OTHERS.

The most effective form of Education in matters pertaining to health, as probably in other things, can be provided by a practical demonstration; and for this reason it is particularly desirable that the hygienic condition of the schools should be of the highest standard obtainable.

In addition to the instruction which the children receive from the teachers in health matters as part of the school curriculum, addresses are given by the Assistant School Medical Officers when they visit the schools, when time and opportunity allow. This important branch of the work is capable of much further development, and now that the school medical inspection staff has been brought up to full strength it ought to be possible to devote a larger amount of time to it. An address from one who has had an opportunity of acquiring a knowledge of medical facts and physiological principles ought to be very helpful, both to the teachers and to the scholars. This is especially so in the matter of food and nutrition, factors which are so important in maintaining the health of the growing child.

The following are particulars of the addresses given by the Assistant School Medical Officers during the year :—

Dr. Harris : (39 lectures)	Care of the Teeth ..	14	Food and Fresh Air ..	1
	Prevention of Spread of Infectious Disease	5	Food and Clothing ..	2
	How to Keep Fit ..	7	Laws of Health ..	2
	Clothing and Exercise	5	Correct Posture ..	1
	Fresh Air and Clothing	1	How, when and what to Eat	1
Dr. Blake : (31 lectures)	Prevention of Dental Decay	9	Effect of Dust on Health	1
	Sleep	5	How Chest and Ribs function, and	
	Fresh Air and Cleanliness	4	Clothing	1
	Clothing and the Sun	2	Eating between meals	1
	Oral Hygiene ..	2	Drinking at Meals ..	1
	Use of Handkerchief..	1	Cleanliness of the Skin	1
	Spread and Prevention of Colds	1	Breathing	1
			Action of Alcohol on the Human Organism	1
Dr. Priestley : (13 lectures)	Prevention of Dental Decay	4	Flatfoot	1
	Cleanliness	4	Postural Deformities	1
	Prevention of Constipation	2	Teeth and Health ..	1
Dr. Astley-Weston : (12 lectures)	Milk	4	Breathing	1
	Care of the Teeth ..	4	General Cleanliness ..	1
	Fresh Air in the bedroom	1	Clean Hands	1
Dr. McCormack : (5 lectures)	Clean and Healthy Child	3	Dangers to Health from Diet	1
	Cleanliness and Beauty	1		
Dr. Nicol : (3 lectures)	Diet	1	Results of Decayed Teeth and Adenoids ..	1
	Coughs	1		
Dr. Wilson Evans : (3 lectures)	Laws of Health ..	2	Food	1

Dr. Evans, as Medical Officer of Health of the Oswestry Urban and Rural Districts, arranged a Health Week in 1930, many of the matters dealt with being of importance to school children, for the attendance of whom special facilities were provided.

ARRANGEMENTS MADE FOR MEDICAL INSPECTION.

For the purpose of inspection the County is divided into areas—one for each Assistant School and Child Welfare Medical Officer. Routine examinations are made at the ages of 5, 8 and 12, and all entrants under five years of age are brought forward for superficial examination, that obvious defects may not go untreated until they reach the age of five. The children found defective on previous occasions are re-examined at each subsequent inspection until declared well. In addition, any children about whose health the teacher or nurse has reason to be concerned are also brought forward for examination. Examples of these are children who have had a recent attack of acute infectious disease, and children who for some reason have fallen behind in their school work.

During the year, 193 schools were visited once only, 124 twice, and 17 three times. This represents a total of 492 medical inspections as opposed to 327 during the previous year. Notwithstanding the fact that it was possible to carry out 165 more medical inspections in 1930 than in 1929, the actual number of children who underwent routine medical examination was slightly less, being 10,383 in 1930 and 10,561 for the previous year. This means that the arrears which had accumulated owing to shortage of staff had been cleared off, and more time was given to re-examinations of defective children and also to special cases. It must also be borne in mind that a larger amount of time is being taken up by the examination of backward and mentally defective children.

The following are particulars of the number of children who underwent routine medical examination by the Assistant School Medical Officers, special cases and re-examination cases not being taken into account in giving these figures :—

	Aged 5.	Aged 8.	Aged 12.	Total.
Dr. Blake	931	991	606	2528
Dr. Priestley	651	559	347	1557
Dr. Weston	486	613	376	1475
Dr. Evans	567	574	279	1420
Dr. Harris	589	707	341	1637
Dr. McCormack (resigned 31st Aug.)	483	590	300	1373
Dr. Nicol (commenced 1st Nov.)	194	137	62	393
Totals for 1930	3901	4171	2311	10383
Totals for 1929	3791	4136	2634	10561

The school nursing is done by 2 whole-time school nurses, 10 health visitors, part of whose time is devoted to school nursing, 86 district nurses working for Associations connected with the Shropshire Nursing Federation, 3 nurses employed by unaffiliated associations, and 2 nurses working on their own account.

The apportionment of the children amongst the nurses is as follows :—

District Nurses acting as School Nurses ..	16282 children.
Whole-time School Nurses	5201 „
Health Visitors	6370 „
Nurses working on their own account	1960 „

FINDINGS OF MEDICAL INSPECTION.

Pediculosis.—Although this branch of the school medical service is peculiarly that of the school nurses, it is convenient to include it under the findings of the school medical inspection work.

The instructions given to the school nurses are to examine the heads of the children each term, and to follow up the verminous children by making subsequent inspections in order to get them clean before the end of the term. The inspection in each term is begun *de novo*, so that there are three primary inspections in each year.

The time has now arrived when verminous conditions can no longer be tolerated, and when the procedure of separation in school, exclusion and finally prosecution should be strictly carried out in accordance with instructions. Proceedings in connection with the radically verminous children, who are the source of the trouble, should be *commenced at the beginning of the term* instead of waiting until the third inspection. These children should now be well known.

It is the policy to give every assistance and advice before prosecuting, and summonses are only issued as a last resort. There can be no doubt, however, that prosecutions are an essential part of any scheme for getting the children's heads clean, as, without them, the really careless and dirty people will continue to be dirty and verminous, and will be a constant danger to the clean part of the school. Legal proceedings were taken in 14 cases during 1930, and in 14 cases during the previous year, fines ranging from 5/- to 10/- being imposed.

During the year the percentage of children found verminous on primary inspection was 4.9, a decrease of 0.7 per cent. on the previous year. At one time or another during the primary and subsequent inspections 10.8 per cent. of children were found verminous, a decrease of 2.9 per cent. on the previous year. The percentage of verminous heads for 1930 is therefore the lowest which has yet been recorded. The following are the particulars :—

Year	Percentage verminous.	Year	Percentage verminous.
1920	14.0	1925	7.5
1921	12.3	1926	6.4
1922	9.9	1927	5.7
1923	9.0	1928	5.4
1924	8.0	1929	5.6
		1930	4.9

The following are the particulars of the primary and following-up inspections during the years 1929 and 1930 :—

	No. of Primary Inspections.	No. of Children.	No. Verminous.	Percentage Verminous.
1929	1133	85261	4743	5.6
1930	1135	87242	4296	4.9

Below are details of the findings at subsequent inspections in the case of those found verminous at the first inspections :—

No. of following-up inspections.		No. verminous at inspections.			
		Second.	Third.	Fourth.	Fifth.
1929 ..	1794	2448	841	289	75
1930 ..	1696	2209	789	216	83

Defects of Throat and Nose.—The causation of unhealthy tonsils and adenoids is a matter concerning which there is much room for discussion, but the probability is that the main pre-disposing cause is defective nutrition, which renders the child liable to frequent coughs and colds, causing, as a result, a chronically unhealthy and catarrhal condition of the throat and nose. In these circumstances the tonsils frequently become permanently diseased, a condition which is especially likely to develop after an attack of scarlet fever, measles or whooping cough, to all of which the child is rendered particularly susceptible by a previously existing catarrhal condition. One hears much these days of the very great importance of vitamins, but probably the commonest defect in the diet of children, not only of the poorer but also of the more well-to-do classes, is the absence of the necessary mineral constituents in their food. Other, but less important, contributory factors in the production of unhealthy tonsils and adenoids are lack of those foods which require vigorous mastication, breathing of a vitiated and therefore infected atmosphere, lack of sunlight and exercise, and failure to take the necessary measures to keep the nose free from discharge and, as a consequence of this, mouth breathing.

There were 2190 children found at medical inspections to be suffering from defects of the throat and nose, of whom 988 required treatment, 1,202 being kept under observation. Of those recommended for treatment, some required removal of tonsils only, others of adenoids, and some of both. The following are the particulars :—

	Tonsils only.	Adenoids only.	Tonsils and Adenoids.	Total.
1929 ..	576	94	388	1058
1930 ..	529	70	368	967

Of the 10,383 children belonging to the code groups who were examined, 847 or 8.2 per cent. required treatment on account of diseases or defects of the throat and nose.

Tuberculosis.—Cases of phthisis amongst school children are discovered by the Medical Inspectors, either in the course of ordinary routine inspection or by the examination of cases specially referred to them by teachers or school nurses. In addition, all school children who come from homes in which a case of phthisis has been diagnosed are the subject of special examination at each medical inspection. By these means all children known to have been in contact with a case of pulmonary tuberculosis, or observed to show signs of failing health, are brought to the notice of the medical inspector, who refers all suspicious or doubtful cases to the Tuberculosis Officer for further examination and observation. Of 503 children from phthisis homes, 443 were examined by the medical inspectors, and in 12 of those referred to the Tuberculosis Officers for further examination phthisis was definitely suspected. The particulars regarding the total number of school children referred to the Tuberculosis Officers during the year are as follows :—

	No. of Children.	Pulmonary Tuberculosis.			Other forms of Tuberculosis.	
		No physical signs.	Sus-pected.	Diag-nosed.	Diag-nosed.	Sus-pected.
New cases	192	142	12	5	30	3
Cases from previous years ..	51	23	..	16	12	..

Ringworm.—When authorised by the School Medical Officer, children suffering from ringworm are now admitted to school, if the parent undertakes to carry out certain stringent precautions. It is also an essential condition of admission that the teacher shall undertake to see that the precautions are carried out.

Of the children examined by the Medical Inspectors 6 were found to be suffering from ringworm of the scalp. In addition, 133 cases were notified by the teachers, although these were not usually based on medical opinion.

Eye Defects.—These include defective vision, squint and external eye defects. Leaflets dealing with squint and myopia are issued for the use of teachers, parents, school nurses and health visitors. One of these is a special leaflet dealing with children the condition of whose eyes is such that they have been recommended for oral teaching only.

There were 737 children with defective eyesight or squint requiring treatment, and 178 with lesser degrees of defect that needed to be kept under observation. Of the children requiring treatment, 638 belonged to the code groups, and 99 were special cases. As children aged 5 are not systematically examined for defective eyesight, the code group cases are mostly aged 8 and 12, and the percentage amongst these children needing treatment was 8.3.

The following table shows the percentage of children at the age of 12 requiring treatment for eye defects since the war :—

Year	Percentage of defects.	Year	Percentage of defects.
1919	10.0	1925	7.9
1920	10.2	1926	7.3
1921	8.5	1927	7.9
1922	7.6	1928	8.1
1923	7.5	1929	9.0
1924	8.2	1930	8.9

Ear Disease and Hearing.—Sixty-four routine cases and 18 special cases were referred for treatment either on account of deafness or otorrhoea, or both. The figures for the previous year were, 75 routine cases and 14 special cases.

Experience has shown that a large number of cases of deafness and otorrhoea are due to an attack of an acute infectious disease, such as measles or scarlet fever, or to throat affections, but especially to the presence of unhealthy tonsils and adenoids. Indeed, it is probable that the reduction in the number of children referred for treatment on account of deafness and otorrhoea which has taken place during the last few years is one of the results of the surgical treatment of unhealthy tonsils and adenoids.

Dental Caries.—The following tables show percentages of dental caries at the various age periods amongst the children examined. These percentages of decayed teeth found by the School Medical Officers correspond fairly closely with those given by the School Dentists.

RESULT OF ROUTINE INSPECTION BY THE MEDICAL AND DENTAL OFFICERS.

	Age 5.			Age 8.			Age 12.		
	No. of children Examined.	Average No. of decayed teeth per child.	Percentage of children free from caries.	No. of children Examined.	Average No. of decayed teeth per child.	Percentage of children free from caries.	No. of children Examined.	Average No. of decayed teeth per child.	Percentage of children free from caries.
Dr. Blake	511	4.4	26	883	3.8	15	568	1.8	32
Dr. Evans	318	3.1	31	439	2.6	28	279	1.5	38
Dr. Priestley	435	4.3	19	518	3.1	16	342	1.5	37
Dr. Weston	342	3.3	25	505	3.4	19	344	1.7	37
Dr. Harris	413	1.7	48	583	1.7	44	325	1.0	51
Dr. McCormack and Dr. Nicol	481	2.9	29	632	3.5	19	343	1.9	36
	2500	3.4	29	3560	3.1	23	2201	1.6	38
Dental Officers		3.2	30		2.7	20		1.8	30

The following table gives the results of inspection by the School Dental Officers of children of all ages :—

Age	Under										
	5	5	6	7	8	9	10	11	12	13	14
Average number of teeth decayed ..	2.7	3.2	2.8	2.9	2.7	2.5	2.3	2.0	1.8	1.9	2.0
Percentage of children free from caries ..	46	30	25	22	20	17	17	23	30	29	22

In these tables extracted and filled teeth are counted as decayed teeth. The actual figures, therefore, do not give quite an accurate representation of the actual condition of the mouths of the children, inasmuch as a child's mouth may have been put into an absolutely healthy and satisfactory condition by means of extractions and fillings, yet each of these would, for statistical purposes, count as a tooth showing dental caries. Read in the light of the above statement, the following table, giving the average number of decayed teeth per child found by the Medical Inspectors since 1919 at the ages of 5, 8 and 12, shows that there has been on the whole a steady, if very gradual, decline in the incidence of dental caries in school children, most marked at the ages of 8 and 12, or in other words, at the ages at which the effect of the school dental scheme has had time to be felt.

Average number of decayed teeth per child found by the Medical Inspectors in the years 1919—1930 :—

Year		Age 5.	Age 8.	Age 12.
1919	..	2.1	3.6	2.1
1920	..	2.16	3.8	2.1
1921	..	2.5	3.5	1.9
1922	..	3.0	3.6	1.7
1923	..	3.4	3.6	1.7
1924	..	3.0	3.3	1.6
1925	..	3.1	3.4	1.6
1926	..	3.0	3.3	1.5
1927	..	2.7	3.4	1.6
1928	..	2.8	3.1	1.5
1929	..	2.9	2.8	1.5
1930	..	3.2	2.7	1.8

Crippling Defects.

The numbers of these defects found at the routine medical inspections were :—rickets 155, spinal curvature 92, other forms 417. Probably the most common of school deformities are knock knees, flat feet and spinal curvatures. A very close relationship has been observed between these conditions, often all found in the same child, and the presence of unhealthy tonsils and adenoids.

The figures given above for rickets are distinctly misleading, in that they represent the actual number of children suffering from deformities due to this condition so pronounced as to necessitate treatment. Fortunately the number of such children is comparatively small, but the fact remains that a very much larger number of children, probably well over 50 per cent. of those entering school, show at the age of 5 years evidence of slight bony deformities which can only be attributed to faulty calcification of the bones, and therefore to rickets. The importance of this is that, as rickets is entirely a disease of defective nutrition, these children must, during the early years of life, have suffered from a serious lack of those constituents of the diet upon

which health and sound body construction depend. Recent work has shown that, in the absence of the proper amount of mineral constituents from the diet, the addition to it of those substances rich in the calcifying vitamin have but little effect. In the presence of rickets it is advisable to trust less to those substances, such as cod liver oil, believed to be rich in intangible vitamins, and to trust more to those foods, such as milk and green vegetables, which are rich in the much more material minerals.

The cases of school children admitted to the Shropshire Orthopaedic Hospital have been analysed in accordance with causation, and show that :—

22 cases or 20.9 per cent.	due to	Tuberculosis.
19	„ 18.1	„ „ „ Nerve Diseases and Injuries.
12	„ 11.4	„ „ „ Fractures and Dislocations.
8	„ 7.6	„ „ „ Flat Foot.
7	„ 6.7	„ „ „ Osteomyelitis.
6	„ 5.7	„ „ „ Spinal Curvature—Non-tubercular.
6	„ 5.7	„ „ „ Claw Foot.
5	„ 4.8	„ „ „ Torticollis.
5	„ 4.8	„ „ „ Arthritis (Septic and Rheumatoid).
4	„ 3.8	„ „ „ Rickets.
3	„ 2.9	„ „ „ Congenital Deformities.
3	„ 2.9	„ „ „ Conditions due to faulty footwear.
3	„ 2.9	„ „ „ Injuries to hands.
2	„ 1.8	„ „ „ Bony Tumours—Non-malignant.

This classification of cases in accordance with causation is extremely instructive, as most of the conditions here mentioned are comparatively easily cured if got under treatment at the very beginning of the disease. This particularly applies to poliomyelitis, rickets and congenital deformities ; and to a considerable extent it applies also to cases of tuberculosis. Many of the tuberculous cases come under notice after considerable damage has been done, the cause of the trouble not having been recognised in the early stages. The paralytic conditions arising from childbirth are possibly also largely preventable, and systematic inquiry into these cases would well repay the trouble.

Goitre.—It seems to have been established that the main factor in the production of simple goitre is a deficiency of iodine in the diet, as there is much evidence to show that in districts where goitre is prevalent it can be prevented by the addition of minute quantities of iodine to the food or drinking water. It is at times when there are special demands for thyroid secretion, such as pregnancy, lactation and adolescence, that the condition is likely to develop ; and it is probably for this reason that in a district deficient in iodine only a certain proportion of the population suffer from goitre. In Shropshire, as the following figures show, simple goitre is not common amongst school children, but casual observation shows that it is not uncommon in the female adult population of the County. In school children it is more common in girls than in boys, especially in the later years of school life.

		Boys.			Girls.			Total.
		Entrants.	Inter.	Leavers.	Entrants.	Inter.	Leavers.	
No. of children	..	1985	2075	1188	1916	2096	1123	10383
Cases of goitre	..	2	11	13	6	17	37	86

Dull and Backward Children.—At the time of the medical inspection the teachers bring to the notice of the medical inspector all children who show signs of mental retardation. In all cases in which the retardation amounts to two years or more a special “ Dull and Backward ” Card is made out, and the child is seen at each subsequent medical inspection as long as definite retardation continues. If a child is retarded as much as three years or more, he is specially examined as a possible case of mental deficiency at the next visit of the medical inspector to the school, unless the retardation is clearly attributable to some other known cause.

During the year there were 626 new cases of retardation amongst the school children, the degree of retardation varying from one to six years. The following analysis of the causes of retardation is of interest in that it shows the relative importance of the various factors commonly found to account for backwardness in school children. Little can be done when the backwardness is due to mental deficiency, suspected mental deficiency and probably also innate dullness ; but out of 626 backward children, in 75 the retardation was found to be due to definitely remediable causes, such as insufficiency of education and physical defects.

Causes of Retardation.	No. of children.	Degrees of retardation expressed in years.						
		1 year	2 years	3 years	4 years	5 years	6 years	Not stated.
Innate Dullness ..	494	24	307	152	10	..	..	1
Insufficiency of Education ..	48	7	24	14	1	..	..	2
Mental Deficiency ..	28	..	2	3	11	8	2	2
Physical Defects ..	27	7	16	1	2	..	..	1
Suspected Mental Deficiency ..	13	..	3	5	4	..	..	1
No Diagnosis ..	10	1	5	3	..	..	..	1
Bad Home Conditions	4	2	1	..	..	..	..	1
Laziness	2	1	1	..	..	..	..	..
	626	42	359	178	28	8	2	9

Perhaps the matter of most practical importance shown by these figures is the number (48) who were dull and backward apparently from insufficiency of education. The backwardness was attributed principally to late commencement of school life, and to some extent to irregular attendance afterwards. Special attention is being paid to those in whom the dull and backward condition was attributed to physical defects with the object of getting these defects remedied.

In addition, 786 children diagnosed as dull and backward in previous years were re-examined the findings in connection with whom were as follows :—

Mentally defective	34
Doubtful cases of mental deficiency	37
Backward, but improving	523
Backward, but not improving	177
Now normal	15

The examination of these backward children takes up a very considerable amount of time of the Assistant School Medical Officers.

INFECTIOUS DISEASES.

All cases of infectious disease amongst the school children are immediately notified by the head teachers to the School Medical Officer and to the District Medical Officer of Health. The Sanitary Authorities also notify cases to the head teachers on the outbreak of notifiable infectious disease in their areas, and inform them of the dates of disinfection of the houses. When there is reason to believe or suspect that an infectious disease is being spread through the agency of children attending school, an investigation is carried out in the school by one of the Assistant School Medical Officers, in order to determine what action is necessary to prevent the further spread of the disease. This is especially necessary in the case of scarlet fever and diphtheria, diseases which are not uncommonly spread by the presence of undetected carriers amongst the school children. Four such investigations were carried out on account of scarlet fever, and five on account of diphtheria. During the year there was an unusually large number of cases of diphtheria, 249 notifications having been received. As there were no large outbreaks of diphtheria, but numerous small outbreaks, the amount of swabbing which had to be done by the Medical Officers and School Nurses in order to control the disease was very considerable, and the schools and homes had to be repeatedly visited to take swabs from the throats of possible carriers or sufferers from diphtheria.

All cases of sore throat, when there is diphtheria in a school, are referred to the School Nurse for swabbing, unless a special investigation is made by the Assistant School Medical Officer ; and, in addition, a letter is sent to the parent advising a doctor and pointing out the danger. Wherever a school is closed on account of diphtheria, special leaflets relating to diphtheria are sent to the Head Teacher for distribution to each household.

No attempt has been made to utilise the Schick or Dick Tests to find out the children who are susceptible to diphtheria or scarlet fever and to immunise them. Under present conditions in elementary schools anything like a general application of the test would probably be impossible, but in certain circumstances the protection afforded by tests and immunisation should be offered to the parents.

There is little justification for carrying out Schick and Dick tests on school children unless the procedure is to be adopted in the county as a whole ; and, in addition, it would be of little value unless followed by immunisation of the children who give a positive response. Even then the immunity secured against these diseases is not absolute, but merely relative, and of somewhat doubtful duration. While, however, the procedure would have a very definite protective effect in the case of those children exposed to infection, it would not prevent them from becoming " carriers " ; and it is the " carrier " who creates the problem of how to control outbreaks of scarlet fever and diphtheria. If the whole community of school children could be immunised, the mortality from these diseases would be definitely reduced ; but as the consent of the parents has to be obtained—and experience in other counties has shown that only a small proportion of parents will give it—a school community of partially protected and quite unprotected children is not a state of affairs which would seem to be of any real value in dealing with these diseases. It is generally too late to proceed with the process of immunisation after one of these diseases has broken out in a district, as the susceptibility is increased and the natural powers of resistance are lowered while active immunity is developing. In a children's home or residential school, however, when everyone could be dealt with, Schick and Dick testing followed by immunisation of susceptible individuals would have a very real protective value.

All notifications of cases of infectious skin conditions are sent to the school nurses, who give instructions and help to the parents in carrying out the routine treatment prescribed. Reports are required from the nurses each month in cases of ringworm, and every fortnight in cases of scabies and impetigo. The cases are also notified to the Attendance Officers, who report when the treatment is not being carried out, or when absence from school appears to be unduly prolonged.

Notifications.—The following notifications were sent in during the year by the head teachers :

Measles	1795	Impetigo	363
Whooping Cough	594	Ringworm	133
Mumps	1293	Scabies	25
Chicken-pox	552	Pneumonia	7
Coughs and Colds	2327	Conjunctivitis	36
Influenza	402	Typhoid Fever	1
Scarlet Fever	155	German Measles	61
Diphtheria	249	Bronchitis	46
Sore Throat	191	Tonsilitis	18
Jaundice	68	Other Diseases	23

Certificates of Exclusion.—Under Article 20 (b), 1,173 certificates of exclusion from school on account of infectious disease and other conditions were sent in by the Assistant School Medical Officers and Tuberculosis Officers, of which the following are the particulars :—

Impetigo	234	Bronchial Catarrh	31
Ringworm of Scalp	24	Heart Conditions	19
Ringworm of Body	32	Mumps	47
Scabies	25	Influenza	14
Tuberculous Glands	30	Chorea	18
Suspected Phthisis	25	Rheumatism	26
Diagnosed Phthisis	6	Tonsilitis	50
Tubercular Peritonitis	4	Coughs and Colds	55
Otorrhoea	13	Sore Throat	34
Bronchitis	55	Whooping Cough	4
Anaemia	16	Scarlet Fever	6
Debility	57	Chicken-pox	29
		Various conditions	319

Closure of Schools.—During the year 25 schools were closed by the Education Authority to prevent the spread of infectious diseases. One of these schools was in the first instance closed by the Local Sanitary Authority, the closure being confirmed by the Education Authority. It is difficult to get the teachers to realise that, from the public health point of view, there is no justification for closing a school unless the spread of infection is thereby going to be prevented ; and that the School Medical Officer has no authority to advise closure on account of poor attendance, notwithstanding the fact that the number of children present is sometimes so low that there seems little justification for keeping the school open. Below are given particulars of the closures of schools on account of outbreaks of infectious disease.

Measles	14
Diphtheria	7
Scarlet Fever	2
Whooping Cough	2

In thirteen instances attempts were made to prevent outbreaks of measles by closing the schools for about a week, six or seven days after the occurrence of the first case, with the following result :—

In 4 instances no further cases occurred. Closure in these cases must therefore be considered to have been without effect and, therefore, unnecessary.

In 3 instances no cases occurred during closure, but further cases developed on re-opening. The result, therefore, did not justify closure.

In 3 instances cases occurred during closure, and further cases developed on re-opening. Closure again proved to be without effect.

In 3 instances one or more cases occurred during the closure, and did not attend school till free from infection. There was no further outbreak, and it is justifiable to conclude that closure was effective in checking the spread of the disease.

It must be recognised that all the schools closed to prevent the spread of measles were very carefully selected, in that they were in sparsely populated country districts in which most of the homes of the children were widely separated. Yet in only three did the result justify the step. In numerous other schools no attempt was made to prevent the spread of infection by closure, as it was apparent from the commencement that its effect must be to prolong and possibly intensify the severity of the outbreak.

FOLLOWING-UP.

The whole of the following up, except such assistance as is given from time to time by the Attendance Officers, is done by the School Nurses, who are notified of the dates of the medical inspections and are always present at the time of the visit of the Medical Inspectors to the schools, unless, as occasionally happens, they are detained elsewhere because of some more urgent matter in connection with their work. The following statement shows how cases recommended for treatment are visited and gives particulars of the number of visits paid :—

	No. of cases.	No. not visited.	Total. visits.
District Nurses (89)	3218	247	7530
Nurses working on their own account (2) ..	228	55	442
Whole-time School Nurses (2)	696	35	3377
Whole-time Health Visitors (10)	1324	118	2470
Total ..	5466	455	13819

FACILITIES FOR TREATMENT PROVIDED BY THE COUNTY COUNCIL.

The following arrangements have been made to provide treatment for school children at hospitals and at clinics held in the County :—

At Hospitals :—

Eye Defects—Eye, Ear and Throat Hospital, Shrewsbury ; Worcester Eye Hospital.
 Ear Defects—Eye, Ear and Throat Hospital, Shrewsbury.
 Throat Defects—Eye, Ear and Throat Hospital, Shrewsbury ; Kidderminster Infirmary ;
 The Lady Forester Hospitals at Broseley and Much Wenlock ; Oswestry, Wellington, Whitchurch, Ellesmere, Chirk, and Shifnal Cottage Hospitals.
 Orthopaedic Conditions—Shropshire Orthopaedic Hospital.
 Pulmonary Tuberculosis—King Edward VII. Memorial Sanatorium, Shirlett ; Prees Heath Sanatorium.

At Clinics :—

School clinics for minor ailments are held at Bridgnorth, Dawley, Ellesmere, Ludlow, Ironbridge, Market Drayton, Newport, Oakengates, Oswestry, Wellington and Whitchurch. These are attended daily and are visited once a week by the Assistant School Medical Officers, with the following exceptions :—Ironbridge, which is only held once a week ; Newport, which is held daily but is only visited fortnightly by the medical officer, and Ellesmere, which is held fortnightly.
 Eye Clinics are held from time to time at Bishop's Castle, Bridgnorth, Highley, Shifnal, Ellesmere, and Whitchurch, and attended by an Assistant School Medical Officer.

An Eye Clinic at Oswestry is held occasionally and attended by a general practitioner. Eye Clinics attended by specialists are held weekly at Ludlow, and occasionally at Market Drayton.

Orthopaedic Clinics, attended by the staff of the Shropshire Orthopaedic Hospital, are held weekly at Bridgnorth, Dawley, Ironbridge, Ludlow, Market Drayton, Oakengates, Oswestry, Shrewsbury, Wellington and Whitchurch, and fortnightly at Ellesmere and Newport.

Tuberculosis Clinics are held at Bridgnorth, Ludlow, Oswestry, Shrewsbury, Wellington and Whitchurch.

X-Ray treatment for ringworm is provided at a clinic in Birmingham by special arrangement with the Birmingham Education Authority.

Skin Disease.—In addition to 890 children treated at the County Council School Clinic, particulars of which are given on p. 20, seven cases were sent to Birmingham for X-Ray treatment for ringworm.

Tuberculosis.—Six school children suffering from phthisis were admitted to the Shirlett Sanatorium during the year, and two to Prees Heath Sanatorium. Particulars of other forms of tuberculosis dealt with at the Shropshire Orthopaedic Hospital are given below.

Crippling Defects and Orthopaedics.—The following is a summary of cases treated at the Shropshire Orthopaedic Hospital during 1930, and paid for by the County Council :—

Disease.	Under 5 years of age.	5—16 years of age.	Over 16 years of age.
Tuberculosis of Bones and Joints	9	22††	42*
Diseases and Injuries of the Nerves	4	19	..
Fractures and Dislocations	2	12	..
Flat Foot .. ..	..	8	..
Osteomyelitis .. ..	..	7	..
Spinal Curvature—Non-tubercular .. ..	..	6	..
Claw Foot .. ..	..	6	..
Torticollis .. ..	..	5	..
Arthritis (Septic and Rheumatoid) .. ..	..	5	..
Club Foot	4	..	..
Rickets	4	4	..
Congenital Deformities	6	3	..
Conditions due to faulty footwear .. ..	..	3	..
Injuries to hands .. ..	..	3	..
Bony Tumours—Non-malignant .. ..	..	2	..
Periostitis	1	..	..
Total for 1930	30	105	42
Total for 1929	32	84	40

† Includes 4 Shrewsbury Borough School Children.

† 1 case afterwards re-diagnosed as "Strain of Hip."

* 2 cases afterwards re-diagnosed as "Non-tubercular," and 1 case afterwards re-diagnosed as "Toxic Arthritis."

In addition to those treated in the Orthopaedic Hospital during the year, a much larger number of cases received treatment at the various After-Care Centres. Some of these cases had already received in-patient treatment at the hospital but, having completed this part of their treatment and having been discharged, continued to receive further treatment as out-patients at the After-Care Centres. A much larger number of patients had, however, never received hospital treatment; and, the orthopaedic effect being only of a minor nature, owing in many instances to early detection, it had been found possible to give the necessary remedial exercises or other simple forms of treatment at the After-Care Centres, thus obviating the necessity for in-patient treatment at the hospital. A large amount of the treatment carried out at the After-Care Centres is, therefore, largely and very profitably preventive, and it would be more correct to describe these centres as Orthopaedic Clinics. In this way the great majority of cases in this county are never allowed to develop orthopaedic defects so pronounced as to necessitate in-patient hospital treatment, and there are consequently in the County of Salop very few people suffering from serious and irremediable crippling defects.

Full particulars of the patients attending the Orthopaedic Clinics are given in the tables facing this page, but the following is a summary of the work carried out at these centres during 1930 :—

No. of attendances	..	..	..	..	..	11,487*
No. of patients treated	..	..	..	..	..	1,819
No. on the books on 1st January	..	..	..	..	..	1,036
No. on the books on 31st December	..	..	..	..	..	1,130
No. of new cases	..	..	..	..	..	783
No. of cases discharged	..	..	..	..	..	689

* 2,182 under five years; 6,354 five to sixteen years; 2,951 over sixteen years.

Eye Defects.—Eighteen children received hospital treatment for external eye defects, and the following table gives details of the treatment of children suffering from defects of vision :—

Hospital or Clinic.	Number of Children seen.	Glasses prescribed.	Glasses obtained.	No. change of Glasses ordered.	Other treatment.	Visit to Salop Hospital advised.	No. Glasses or treatment necessary.
Salop Eye, Ear and Throat Hospital	765	541	541	119	51	..	54
Ludlow Eye Clinic	174	142	142	20	6	..	6
Oswestry Eye Clinic	120	110	108	7	..	1	2
Market Drayton Eye Clinic ..	64	45	44	..	7	..	12
Assistant School Medical Officer at Whitchurch Eye Clinic ..	45	30	30	12	..	1	2
Bridgnorth do.	49	39	38	8	..	..	2
Bishop's Castle do.	12	8	8	2	..	..	2
Highley do.	30	23	23	6	..	..	1
Ellesmere do.	32	25	25	4	..	..	3
Shifnal do.	18	18	17	..	..	..	..
Totals for 1930	1309	981	976	178	64	2	84
Totals for 1929	1055	785	777	136	61	3	70

NUMBER OF PATIENTS TREATED AT SHROPSHIRE AFTER-CARE CENTRES DURING THE YEAR 1930.

Diagnosis.	Total treated.			Cured.			Improved.			Refused treatment.			Left District.			Treated elsewhere.			No improvement.			Died.			Number on Books. 31/12/30.		
	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+
1. Arthritis	1	8	78	1	2	4	12	4	..	2	2	3	2	1	..	4	50
2. Con. Deformities	47	36	4	3	1	..	1	1	..	2	2	1	2	1	..	2	1	..	..	..	..	..	..	37	30	3
3. Claw Foot .. ..	..	26	20	..	6	1	..	1	6	..	4	1	..	..	1	..	..	..	..	..	..	..	..	..	15	11
4. Erb's Palsy	9	1	..	..	..	..	1	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	..
5. Flat Foot	42	127	94	2	12	6	..	6	10	6	23	11	1	1	3	..	1	2	..	..	..	..	..	33	84	62
6. Hallux Rigidus .. ..	..	5	6	..	..	1	..	..	2	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	3	2
7. Hallux Valgus .. ..	..	1	13	..	..	4	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
8. Injuries	14	67	104	1	29	26	..	1	14	2	4	9	2	1	2	..	..	6	..	..	..	..	..	9	32	47
9. Knock-knees	32	66	1	1	5	2	..	2	12	..	1	1	1	1	1	..	27	44	1
10. Osteomyelitis	2	16	12	..	1	..	..	..	1	..	..	1	..	..	..	..	1	2	..	..	..	..	..	2	14	8
11. Poliomyelitis	8	62	25	..	..	..	..	2	6	..	1	..	2	3	1	..	1	1	..	..	..	..	..	6	55	17
12. Rickets	40	12	..	11	1	..	1	2	..	8	2	..	..	..	..	..	..	..	..	..	..	..	..	20	7	..
13. Round Back .. ..	..	35	8	..	7	..	..	..	1	..	8	3	..	2	..	..	2	1	..	..	..	..	..	..	16	3
14. Scoliosis	2	14	15	..	1	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	13	12
15. Spastic Diplegia	1	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	1
16. Spastic Hemiplegia	2	14	12	..	..	1	..	..	3	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	14	7
17. Spastic Monoplegia .. ..	..	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
18. Spastic Paraplegia	4	10	3	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	3	8	3
19. Surgical T.B.	13	50	89	1	4	1	1	2	8	..	1	3	..	2	5	3	1	2	11	40	67
20. Torticollis	3	8	..	..	1	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	6	..
? T.B. .. ..	..	3	11	..	..	1	..	..	1	..	..	2	..	..	1	..	..	1	..	..	..	..	..	..	3	5
Others	13	49	69	1	11	9	1	2	12	3	3	5	2	..	3	2	..	1	3	8	29	36
Totals	233	617	565	21	81	54	6	20	79	27	65	43	10	13	17	2	11	21	..	1	5	1	2	3	166	424	343
	1415			156			105			135			40			34			6			6			933		

N.B.—Cases from the Borough of Shrewsbury (with the exception of tuberculous patients) are excluded from this Table.

PREVENTIVE CASES.

Diagnosis.	Total treated.			Cured.			Improved.			Refused treatment.			Left District.			Treated elsewhere.			No improvement.			Died.			On Books 31/12/1930.		
	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+
1. Claw Foot .. ..	..	2	2	..	2	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Flat Foot	18	139	6	3	17	3	..	6	1	6	42	..	..	4	1	..	2	..	..	..	..	..	..	9	68	1	
3. Knock-knees	34	122	..	1	22	..	..	1	..	7	45	..	..	..	..	..	..	..	..	..	1	..	..	25	54	..	
4. Rickets	21	5	..	5	..	..	2	1	..	4	3	..	..	..	..	..	..	..	..	..	..	..	10	1	..		
5. Round Back	1	43	1	1	9	..	..	3	..	..	7	1	..	..	..	..	2	..	..	..	..	..	..	22	..		
6. Others	3	7	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	2	5	..		
Totals	77	318	9	10	51	4	2	11	2	18	98	1	..	4	1	..	4	..	..	..	1	..	..	46	150	1	
	404			65			15			117			5			4			0			1			197		

Ear Disease and Hearing.

Hospital.	Number of Children seen.	Received Treatment.				Awaiting Throat Operation.
		Remedied.	Im-proved.	Not im-proved.	Not known.	
Salop Eye, Ear and Throat Hospital ..	59	18	34	5	1	1
Totals for 1929 ..	55	15	29	8	..	3

A number of these children required treatment for deafness and otorrhoea as a consequence of unhealthy tonsils and adenoids, treatment for which had previously been refused.

Diseases of the Throat and Nose.—Eleven children suffering from purely nasal conditions received treatment at the Salop Eye, Ear and Throat Hospital. The commonest conditions, however, which necessitated hospital treatment were unhealthy tonsils and adenoids, particulars of which are as follows :—

Hospital.	Number of Children seen.	Operated on.	Other treatment.
Salop Eye, Ear and Throat Hospital ..	216	214	2
Broseley and Wenlock Hospitals ..	111	111	..
Oswestry Cottage Hospital	52	52	..
Ellesmere Cottage Hospital	29	29	..
Kidderminster Hospital	13	13	..
Wellington Cottage Hospital	349	349	..
Chirk Cottage Hospital	5	5	..
Shifnal Cottage Hospital	17	17	..
Total ..	792	790	2
Totals for 1929	522	520	2

Reports received from the Medical Officers on 558 children who had undergone operative treatment for tonsil and adenoid conditions showed, on the whole, a very great improvement in the health of the children, although in a number of cases the tonsils and adenoids had not been completely removed. Below is given in tabular form a brief summary of these reports :—

No. with Tonsils and Adenoids.	No. with Tonsils only.	No. with Adenoids only.	Total No. of cases.	No. of cases completely dealt with.	No. of cases not completely dealt with.		
					Tonsils.	Adenoids.	Tonsils and Adenoids.
534	20	4	558	497	57	1	3

EFFECTS OF OPERATION UPON HEALTH.

	<i>Cured.</i>	<i>Improved.</i>	<i>Not improved.</i>
Mouth Breathing	420	86	14
Otorrhoea	17	1	3
Deafness	7	7	1
Nasal Discharge	38	36	2
Enlarged Glands	160	28	8
Minor Deformities	8	16	..
Rheumatism	4	..	..
Intelligence .. ..	..	44	..
Speech .. ..	..	1	..
Bronchitis	6	..	..
General Health .. ..	..	540	11
Chest Expansion .. ..	..	6	..

School Clinics for Minor Ailments.

Table showing conditions for which treatment was received.

Defect or Illness.	Children referred at S.M.I.	Other Children.	Examinations by M.O.	Attendances.	Results of Treatment.		
					Remedied.	Improved.	Unaltered.
Skin :—*							
Ringworm—head	5	46	70	704	41	10	..
Ringworm—body	2	54	80	291	51	1	..
Scabies	6	20	39	108	26	..	..
Impetigo	23	463	736	3383	460	15	8
Minor Injuries	25	772	1501	2660	734	44	7
Other skin diseases	2	259	293	1646	233	23	5
Ear Disease	36	131	331	1222	104	47	11
Eye disease (external and other)	54	248	493	7167	201	59	22
Verminous conditions	3	44	8	124	46	18	..
Other conditions	155	1461	2393	7033	1237	237	100
Total for 1930	311	3498	5944	24338	3133	454	153
Total for 1929	211	3117	3831	17011	2792	357	120

Table showing attendances at each Clinic.

Clinic.	Children referred at S.M.I.	Other Children.	Examinations by M.O.	Attendances.	Results of Treatment.		
					Remedied.	Improved.	Unaltered.
Bridgnorth	5	222	399	2384	221	6	..
Dawley	43	212	760	1967	197	47	11
Ludlow	20	527	496	5220	516	26	5
Ironbridge	59	186	362	429	164	20	59
Market Drayton	50	463	1220	4205	428	56	29
Newport	39	223	277	1852	220	31	2
Oakengates	15	659	1047	3485	477	191	6
Oswestry	62	460	486	2183	436	34	9
Wellington	12	381	373	647	355	35	3
Whitchurch	6	165	524	1966	119	8	29
Totals	311	3498	5944	24338	3133	454	153
Total for all Clinics, 1922 ..	347	1126	..	8197	1172	238	62
" " 1923 ..	312	1640	..	10034	1674	206	72
" " 1924 ..	195	1540	..	11662	1402	235	77
" " 1925 ..	244	2017	..	13020	1768	331	82
" " 1926 ..	329	2507	..	13005	2211	444	93
" " 1927 ..	405	2717	..	15158	2505	442	161
" " 1928 ..	301	3006	..	18409	2537	560	174
" " 1929 ..	211	3117	3831	17011	2792	357	120
" " 1930 ..	311	3498	5944	24338	3133	454	153

Teeth.—The prevention of decay of teeth is now receiving considerably more attention than formerly from bodies responsible for the public health, and for the last ten or more years efforts have been made in this county through the schools, and by means of the health visitors, to teach the prevention of dental caries on physiological lines.

The principal factors in the cause of dental caries are those which determine the acid fermentation of food in contact with the teeth, and simple rules of prevention have been drawn up and supplied to the schools and to the health visitors. The directions to the health visitors are to leave these at every house where there are young children and to explain them to the mothers. In addition, lectures have been given by the medical staff to school teachers, to nurses, to mothers at the Child Welfare Centres, and by the County Council health lecturer to the children at the schools. This teaching is regarded as one of the most important duties of the health visitors. There is reason to think that there has been a considerable improvement in the teeth of the children of the County, but without some general acknowledgment of the supreme importance of the work, it seems almost impossible to get that sustained interest and enthusiasm amongst the workers, and that receptivity amongst the public, that is so essential for any great success.

In the scheme of dental treatment the ends which have been kept steadily in view are :—

- (1) That the inspection should be of a *systematic* character.
- (2) That all the schools should be dealt with in a reasonable time, and if possible within twelve months.
- (3) That the mouth of every child treated should be freed from any gross septic conditions, and that every decayed permanent tooth that is saveable should be saved.
- (4) That, subject to the foregoing conditions, and to the proviso that every filling should be done as well as possible, so that it will be really permanent, the largest number of children possible should be dealt with.

The success or failure of the scheme must depend upon the amount of sepsis removed and the number of permanent teeth saved, and not upon the refinements of dental treatment. In small country schools inspection and treatment are carried out at the same time; and in all other schools arrangements are made for treatment either at the school or at a clinic some three weeks after inspection. Children of all ages in the schools have been dealt with since October, 1923. This is a very important advance.

Not only are all ages dealt with, but the schools are now being visited on an average about once in seven months. This has been possible owing, partly and unfortunately, to the considerable number of refusals, but chiefly to the smaller amount of attention required as a result of previous treatment. The results of inspection and treatment are given in the tables at the end of the report.

All the schools except one were inspected and treated during the year,

127 schools were treated twice during the year, and

27 schools were inspected twice, but the second treatment was not given until 1931.

The number of unsaveable permanent teeth is a measure of the imperfection of the dental scheme. A tooth becomes unsaveable when the decay has reached the pulp cavity, or very close to the pulp cavity. It is very satisfactory that in 35,058 examinations of children, only 2,401 unsaveable permanent teeth were found, and 2,141 of these were due to refusal of treatment at the previous inspection. Only 260 can therefore be legitimately attributed to any shortcomings of the scheme. Of this number 113 were due to lack of opportunity to complete the treatment of the mouth on the previous occasion, 19 were due to an unusually long inter-inspection period, and only 128 were due to the fact that the caries was so rapid as to destroy the tooth in the ordinary inter-inspection period. These figures are extremely encouraging, showing, as they do, that if there were no refusals, and no extra long periods between inspections, there would be very few permanent teeth destroyed. In the East of the County where treatment is carried out principally in clinics, and where there is probably more opportunity for treating those children who could not for some reason be dealt with on the day arranged, the total number of unsaveable teeth, apart from refusals, was only 13.

The difference between the number referred for treatment, including 2,433 cases brought forward from 1929, and the number treated was 7,848. The details are given in the following statement:—

	Refusals.	Absent on day of Treatment	Left School.	To be treated in 1931.	Treatment deferred.
East of County (Mr. Birch)	1365	283	23	615	0
South of County (Mr. Keenan)	1286	126	28	413	65
North of County (Mr. Catchpole)	2953	231	28	416	16
Totals	5604	640	79	1444	81

It will be noted that there were no less than 5,604 refusals of treatment. The following table shows the schools in which the percentage of consents was very high, and those in which it was very low. In 1929, 26 schools had over 90 per cent. of "consents," and there were 43 with not more than 50 per cent. In 1930, there were 36 schools with over 90 per cent. of consents and 38 schools with less than 50 per cent.

PERCENTAGES OF " CONSENTS " FOR TREATMENT.—SCHOOLS WITH 90 PER CENT. OR OVER.

†Sutton Maddock	100	**Wroxeter	93
Buildwas	100	Acton Burnell	93
*Donington	100	**Loughton	92
Chetwynd	100	**Lee Brockhurst	92
Dudleston	100	**Hordley	92
**Adderley	99	Stanton Lacy	92
Quatt	98	Woodcote	92
Bucknell	96	*Fitz	92
*Ryton	96	Wombidge C.E. Boys	92
Ketley Cl. Infants	96	Astley Abbots	91
*Kynnersley	95	Hook-a-gate	91
**Rhydycroesau	95	Richards Castle	91
Brockton	95	Bicton	91
Cardington	94	Highley Mixed	91
**Leighton	94	Malins Lee Institute	91
Wrockwardine Wood Cl. Boys	94	Cleeton C.E.	90
Cleobury Mortimer Boys	93	Alberbury	90
Longnor	93		
Stanton-on-Hine-Heath	93		

† Sutton Maddock has returned 100 per cent. consents for the last four years.
 ** Over 90 per cent. consents received in 1928 and 1929.
 * " " " " " 1929.

SCHOOLS WITH NOT MORE THAN 50 PER CENT.

Much Wenlock Infants	50	Whitchurch C.E. Girls	45
Donnington Wood Infants	50	Myddle	43
Market Drayton Boys	50	Prees Lower Heath	43
Bridgnorth St. Leonard's Girls	50	Abdon	42
Bishop's Castle Infants	50	Wem C.E.	40
Bromlow	50	Newtown	40
Lineal	50	Selattyn	40
Neen Sollars	50	Criftins	40
Button Oak	50	Neen Savage	39
Moreton	49	Bettws-y-Crwyn	39
Whitchurch Wes. Mixed	48	Wrockwardine C.E. Boys	39
Oswestry Trinity Mixed	48	Stoke-on-Tern	38
Leaton	48	Coreley	38
Eaton Constantine	46	Lydbury North	38
Ash	46	Knockin	36
Weston Rhyn	46	Baschurch	36
Ifton Heath	46	Wem Undl.	36
Bridgnorth, St. Mary Infants	46	Oswestry Senior Boys	35
Nash	46	Kinlet	35
		Clee St. Margaret	34

It may be looked upon as a reflection on our educational system that, although it has brought about great changes for the better, after fifty years of universal education we should find a considerable percentage of the people refusing dental treatment for their children, when skilled treatment is provided free of cost. We know that in the more highly educated classes dental treatment is sought after and obtained at much cost and inconvenience, and we may infer that the large majority of parents who refuse dental treatment do so because they fail to understand and appreciate the importance of sound teeth in the maintenance of health and the damaging effect on the whole organism of dental caries.

OPEN AIR EDUCATION.

Playground Classes are encouraged, but although they are increasing, they are held only in a comparatively small number of schools. In a climate such as we have in this country, it is unlikely that there will be any great development of open-air education until it is possible to give it by educating children in schools constructed on the open-air principle.

A *School Journey* and *School Camp* was organised by the Head Teacher of the Albrighton School, and sixteen boys took part, camping out for twelve days at Rhyl, visiting places of interest and engaging in healthful exercises and games.

Residential Open-Air Schools.—There are always a certain number of children who are in a persistently poor state of health, not traceable to any definite physical defect, but probably attributable in most instances to poor home circumstances, lack of proper food and unhygienic conditions. No form of purely medical treatment can be expected to restore them to normal health, and the only remedy would seem to be to get them removed to where there are better conditions of life, and where their physical requirements will be more adequately met. It is for these children that a period of residence in an open-air school is particularly beneficial, and three carefully selected children were sent to open-air schools in 1930, none of whom had been discharged at the end of the year. Two of the children admitted to open-air schools in 1929 were still in the school at the commencement of 1930, and one remained there throughout the year. The other was discharged after a stay of 11½ months greatly improved in general health and appearance, and showing an increase in weight of 22 lbs.

PHYSICAL TRAINING.

Exercise, fresh air conditions and proper food are the primary factors which govern growth and health, and by attention to these matters we strike at the root of disease. Measures directed to the early treatment of disease, or to the prevention of particular diseases, although important, can never yield the same result to the State, and consequently it is essential that we should concentrate our energies more especially on these general measures which are essential for the full growth and vitality of the great mass of school children. Of these measures, a good scheme of physical instruction is one of the most important.

In addition to attending to the physical development of all the school children, which is of course infinitely the most important matter, the question of remedial exercises for children requiring them has received considerable attention. Those children whose deformities are serious are dealt with by admission for a period into the Orthopaedic Hospital. For the continuation of treatment in these cases, and for the treatment of slighter cases, provision is made at the Orthopaedic After-care Centres, and the School Nurses are encouraged to work in close co-operation with the Orthopaedic Staff in order to ensure the carrying out of such daily exercises as are necessary.

The work of the Physical Organiser, which is developing along satisfactory lines, is undoubtedly bringing about a gradual improvement in the general condition of the school population, evidence of which is to be seen in the better posture of the children; and notwithstanding the unfortunate condition of a large number of the playgrounds, good progress is being made.

The acquisition of playing fields is slowly proceeding in various parts of the County, but it has again to be reported that the provision in Wellington, Oswestry, Whitchurch, and Ellesmere is still inadequate.

The Physical Organiser not only visits the schools in order to supervise and guide the teachers in this branch of their work, but also arranges special classes for teachers which are held in various parts of the County in the evenings and on Saturday mornings. During the year, courses of

instruction were given at Wem, Ellesmere, Cleobury Mortimer, Clun and Craven Arms, and a total number of 133 teachers attended. Bearing in mind the fact that many of these teachers can only attend at much inconvenience to themselves, this is a very gratifying and praiseworthy result. In addition, a short course of four lessons was given in Shrewsbury, and was very well attended by teachers from the County areas.

SCHOOL BATHS.—An arrangement has been made in Whitchurch, Oswestry, Wellington, Ellesmere and Bridgnorth whereby the older Elementary School children in these areas are sent for swimming instruction once weekly. The Organiser of Physical Training is giving special consideration to the utilisation of natural waters in country districts for teaching swimming.

REPORT OF MRS. DAVEY, THE ORGANISER OF PHYSICAL TRAINING, 1930.

During the year Physical Training Classes for teachers were held as follows :—

Date.	Centre.	No. of Sessions.	Duration of each Session.	No. of Teachers.	Percentage of attendance
1 April—27 May	.. Wem ..	8	1½ hours	37	89.0
7 April—2 June	.. Ellesmere ..	8	1½ hours	21	91.6
16 June—14 July	.. Cleobury Mortimer	5	2 hours	21	83.0
17 June—15 July	.. Clun	5	2 hours.	25	96.4
16 Sept.—11 Nov.	.. Craven Arms ..	9	1½ hours	29	88.5

A rather different arrangement was made for classes this year. Formerly they had been held during the winter months, but it was found that many of the teachers had difficulty in attending owing to fog or floods or other inclement weather. Consequently it was decided to try holding most of the classes in the summer months. This certainly proved successful, attendance was better and classes could often be taken out of doors, giving more scope for games coaching.

The class at Clun was especially satisfactory, the attendance being excellent notwithstanding the fact that the teachers came at their own expense from outlying Schools such as Bettws-y-Crwyn, Llanfairwaterdine, Newcastle, Chapel Lawn. All the members of the class earned a "Certificate," which is only awarded to those who put in 75 per cent. of attendance and take an active part in the Physical Training.

The re-organisation of the schools into Senior and Junior Departments is advantageous from the point of view of Physical Education.

It is desirable that one teacher should be appointed for Physical Training in the Senior Department.

So far as has been possible, the specialist teachers already appointed at the Senior Schools have attended a Vacation Course in Physical Training, in most cases with the financial assistance of the Local Education Authority. These grants are of great value to the development of Physical Education, and this year teachers from the following Schools were selected to attend a Vacation Course at Scarborough :—Ludlow Senior Boys', Clun C. of E., Hadley Boys', Wem C. of E., Oswestry Senior Girls', Shrewsbury Senior Girls'.

Swimming.—Last year the Organiser gave a considerable amount of time supervising the instruction at the different swimming centres in the County. It was ascertained that there was insufficient method in the teaching, and few (if any) records were kept.

This year an "Attendance and Progress" Register was issued to each School which included swimming in the curriculum, and from inspection of these Registers the results appear to be rather disappointing. Every effort should be made to get better results next year.

All teachers who were concerned in swimming instruction in the County and Shrewsbury Schools were invited to attend a meeting, arranged by the Organiser, at the Shrewsbury Baths on 3rd May. Mr. Shimmin, Head Master of Garston Road School, Liverpool, who has been exceptionally successful in his own teaching of Swimming, brought a team of boys from Liverpool. The boys demonstrated the various swimming strokes, and advice was given by Mr. Shimmin as to the best method of teaching each stroke. The Shrewsbury Baths Committee kindly lent the large Bath for the occasion, and the County Authority helped towards the travelling expenses incurred by the demonstrators.

Playing Fields.—Progress is being made in the acquisition of Playing Fields in various parts of the County.

Netball.—Netball is making headway throughout the County : some Schools are developing a really good standard of play. A number of schools, which were quite unprepared to tackle the game a few years ago, are now playing very successfully. This is chiefly due to the better understanding by the teachers of the value of "playground games" as a preparation for the "major games," and to the provision of the necessary apparatus by the Local Education Authority.

Netball-Leagues.—The winners of the final matches in the Netball Leagues were as follows :—

WREKIN AREA	(8 teams)	..	Donnington Wood Girls'.
NEWPORT AREA	(5 teams)	..	Donnington Wood Girls' (second team).
WEM AREA	(7 teams)	..	Wem C. of E. Girls'.
OSWESTRY AREA	(9 teams)	..	Oswestry Senior Girls'.
MADELEY AREA	(7 teams)	..	Madeley C. of E. Girls'.

Madeley C. of E. Girls' School also won the "Knock-out" Competition held at Madeley on 30th September.

Football.—The winning football teams in the County were as follows :—

OSWESTRY WEST	(8 teams)	..	Llanymynech.
OSWESTRY EAST	(7 teams)	..	Weston Rhyn.
WREKIN SENIOR	(14 teams)	..	St. George's.
WREKIN JUNIOR	(4 teams)	..	Dawley C. of E.
WHITCHURCH	(7 teams)	..	Whitchurch C. of E.

In addition to the local leagues, there is a "Knock-out" Competition for all Shropshire Schools. The very fine shield (given by the Shropshire Football Association) was won by the Oswestry Senior Boys' School this year.

The Windsor Clive Charity Cup—which was competed for this year by 8 School teams in the Bridgnorth Area—was won by Highley.

Shropshire also enters teams for the English Schools Football Association Shield.

The Wrekin Athletic Association organised a Sports Day on a big scale at St. George's on 5th July. The Shields were won as follows :—

	Girls.	Boys.
SENIOR SHIELD :—	St. George's.	Wrockwardine Wood Council and St. George's tied.
JUNIOR SHIELD :—	Langley.	Langley.

In general the Physical Training work in the County is developing satisfactorily. The posture of the school child has decidedly improved.

KATHARINE W. DAVEY.

CO-OPERATION OF PARENTS, TEACHERS, SCHOOL ATTENDANCE OFFICERS AND VOLUNTARY BODIES.

PARENTS.—A notice is sent to all parents inviting their presence at the routine medical and dental inspections, and a special effort is always made to get the parents of seriously defective children to attend.

TEACHERS.—In addition to the routine help at medical inspection described in the earlier reports, the teachers are asked to pay special attention to the attitude of the children in school and to correct false positions, to see that the children wear spectacles when prescribed, to see that children with visual and aural defects get the special school treatment indicated, to note abnormalities and call the attention of the Medical Officers to them, to exclude cases of suspected infections in accordance with directions, to report exclusions, and to distribute directions with regard to infectious disease to parents on certain occasions.

SCHOOL ATTENDANCE OFFICERS.—School Attendance Officers are present at the medical inspections when required, and are available for bringing up children who are absent and whose examination is considered desirable. They are supposed to keep a strict lookout on children absent on account of verminous or skin conditions in order to see that the treatment prescribed is not neglected. In persistently verminous cases, where it is necessary to take legal proceedings and the nurse objects to appearing in court, they are always present at the final examination of the child, and are therefore able to give evidence when required.

The opportunities which they have of seeing whether children absent from school on medical grounds are getting treatment are often greater than the opportunities of the school nurse, and they are now instructed to report at once any such children who are absent and are apparently not receiving or carrying out treatment, so that they can be further investigated if necessary by the medical department. They are also required to report on children excluded by the Medical Inspector whose parents are not carrying out the treatment prescribed.

VOLUNTARY BODIES AND VOLUNTARY HELPERS.

Much of the routine work formerly undertaken by voluntary helpers is now done by the school nurses, and where the school nursing is done by the District Nurse the Secretary of the Local Nursing Association is very frequently most helpful.

The Inspector of the National Society for the Prevention of Cruelty to Children has been of great help in obtaining medical treatment where other means have failed, and in dealing with cases of gross neglect.

BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

Methods of Ascertainment.—For the ascertainment of these, reliance is placed principally upon the visits of the health visitor to the homes of the children under school age, as these visits should bring to light all defective children who have been born in the County and, with a lesser degree of certainty, defective children who have removed into the County. To make ascertainment absolutely complete there should be prompt notification of movements of defective children from the area of one Authority to that of another.

In addition, the Attendance Officers make an annual census of all defective children, and for this purpose are supposed to visit every house. For defects that develop during school age, one has to rely upon the inspections of the Medical Officers and the vigilance of the teachers. In addition to these measures, the Attendance Officers call the attention of the Medical Department to children who are permanently absent from school.

The following table gives particulars of the numbers of exceptional children *examined* during the year by the Medical Officers.

	Certified suitable for Special School.	Notified to Local Authority as uneducable.	To be kept under observation.
Mentally Defective	44†	22*	46
Epileptic	1	..	3
Blind	1	..	..
Deaf and Dumb	1	..	..
Physically Defective ..	104	..	..

*17 Imbeciles, 1 Idiot, and 4 Feeble-minded.

†Mentally defective children admitted to Special Schools in 1930	3
No. not admitted	41
	—

Reasons for non-admission :—Parents' refusal	44
Too old	32
Awaiting vacancies	6
Found unsuitable	1
	2

The number of exceptional children admitted to special schools during 1930, whether examined during that year or previously, was—Blind 4, Deaf and Dumb 3, Epileptic 0, Mentally Defective 6, Physically Defective 98.

During the year 1930, the striking feature was the large number of mentally defective children attending the Public Elementary Schools. These to a considerable extent consisted of children who had been certified for a special school, but either their parents objected to their removal or they were considered too defective for admission.

These children are now put under systematic supervision of the whole-time school nurses, and at the age of 16 are transferred to the supervision of the Health Visitors, although they cannot be notified formally to the Local Authority under the Mental Deficiency Act.

Orthopaedic Hospital and Special School.—The more serious orthopaedic cases are admitted to the Hospital on the recommendation of the School Medical Officer. The cases are discovered principally by the School Medical Officers and nurses, every effort being made to get the cases as early as possible.

Schools for the Blind and Schools for the Deaf.—In both these classes of schools accommodation is always found if the parents are willing for removal. Every effort is made to get these cases under early treatment.

Mentally Defectives.—The accommodation is not sufficient for the needs of the County, and would be grossly insufficient if all suitable cases were compulsorily removed. There are at present 14 children in Sandlebridge Special School from this County.

NURSERY SCHOOLS.

There are none of these schools in this County ; nor does the need for provision appear to be particularly urgent.

CONTINUATION SCHOOLS.—There are no Continuation Schools in the County.

EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

The children over 12 years of age in private employment come under the notice of the Assistant School Medical Officers at each visit to the schools.

If a Medical Officer considers one of these employed children is not in a fit state of health to be employed outside school hours, the facts are transmitted to the Secretary for Education for appropriate action to be taken.

SECONDARY SCHOOLS.

Medical inspection is carried out in 18 of the 20 Secondary Schools in the County. Five of the Secondary Schools are Aided Schools ; and of these Aided Schools three undergo medical inspection. As three of the Secondary Schools, namely, Bishop's Castle, Cleobury Mortimer and the Bridgnorth Grammar School, are mixed schools, they have to be inspected by male and female medical officers. An effort is made to carry out an inspection in each school every term, and during the year all the schools were visited three times. The number of children in attendance in Secondary Schools in the County in September, 1930, was 3,120, and the number of children on the registers of those secondary schools which underwent medical inspection was, on that date, 2,725.

No arrangements have been made by the Local Education Authority for providing treatment for children in whom defects are found at routine medical inspections, and the parents are not visited by school nurses, as is the case in Elementary Schools, who point out the necessity for treatment and urge the parents to take immediate steps to obtain it. The whole question of treatment is left in the hands of the Head Masters and Head Mistresses, who write to the parents regarding any children for whom treatment has been advised by the medical inspectors.

The children who undergo routine medical examination at the visit of the medical inspector are entrants, children aged 12 and 15, and leavers. In addition, re-examination is carried out in the case of those children in whom some defect has been found at a previous examination, and progress is recorded on a treatment card till further examination on account of defects found is no longer indicated. The head master or head mistress also brings forward for special examination any children, not included in the groups mentioned above, in whose case there seems to be a condition or defect requiring medical attention.

While it is true that, amongst Secondary School children, treatment for defects of the grosser type is more readily obtained by the parents than amongst Elementary School children, at the same time, when a defect is of the minor type, a larger number of those discovered in Secondary School children go untreated. This last is probably to be attributed partly to the fact that, after a medical inspection in an Elementary School, the homes of the children in whom defects have been found are visited by the school nurses, who point out to the parents the necessity for obtaining treatment at the earliest possible moment, and partly to the fact that facilities for treatment of children in attendance at elementary schools are provided by the Local Education Authority. As, however, about half of the children in attendance at Secondary Schools have free places, and therefore come from substantially the same class of home as the children in Elementary Schools, the considerations which make desirable the provision of treatment under County Council Schemes for children in attendance at Elementary Schools apply with at least equal force to about 50 per cent. of the children in attendance at Secondary Schools.

Below is given in tabular form particulars of the children examined by the medical inspectors.

A.—ROUTINE MEDICAL INSPECTIONS.

Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total.
Boys	1	3	..	5	13	14	80	138	218	71	64	235	28	11	15	2	..	898
Girls	3	8	6	11	16	17	93	172	219	83	86	255	38	33	21	4	1	1066
Totals ..	4	11	6	16	29	31	173	310	437	154	150	490	66	44	36	6	1	1964

RE-EXAMINATIONS.	SPECIAL EXAMINATIONS.	TOTAL.
Boys 722	4	726
Girls 929	21	950
<u>1651</u>	<u>25</u>	<u>1676</u>

DEFECTS FOUND AND TREATMENT RECEIVED.

On pages 41 and 42 at the end of the report are tables giving details of defects found, requiring either observation or treatment ; and below is given in convenient form for reference a summary of the defects, with a statement of the number of children found during the year by the medical inspectors to have obtained treatment for defects discovered at previous examinations.

	Defective Eyesight.	Tonsils & Adenoids.	Ear Conditions.	Skin Disease.	Orthopaedic Defects.	Other Conditions.	Total.
Defects discovered	198	61	18	6	63	49	395
Defects treated ..	118	20	13	6	71	8	236

DENTAL INSPECTION AND TREATMENT.

During the year a commencement was made with a scheme for the provision of dental treatment for children in attendance at Secondary Schools. The scheme is virtually the same as that under which dental inspection and treatment is provided in Elementary Schools. All the schools in which medical inspection is carried out are visited by the Dental Officers, and all the children are inspected at each visit. Only those children, however, who have free places receive treatment under the scheme of the Local Education Authority. The parents of the other children are advised to obtain the necessary treatment through the agency of private dentists. Inspection and treatment were carried out once during the year in eighteen of the Secondary Schools, and the findings of the School Dental Officers are given in the tables below, in which the condition of the mouths of free placers, fee paying and elementary school children are compared.

AVERAGE NUMBER OF DECAYED TEETH PER CHILD.

	Under	7	8	9	10	11	12	13	14	15	16	17	18	Total
Free-placers	2.2	1.8	1.8	1.8	2.2	2.2	2.2	3.6	2.8	2.1
Fee-paying	2.6	4.0	3.5	2.1	2.5	2.2	2.4	2.4	2.7	2.6	2.6
Elementary	2.7	2.5	2.3	2.0	1.8	1.9	2.0	..	..	2.2

			PERCENTAGE FREE FROM CARIES.												
Under			7	8	9	10	11	12	13	14	15	16	17	18	Total.
Free-placers	..	..				16	21	25	26	21	24	16	2	14	21
Fee-paying	..	..	26	12	13	17	15	24	22	24	18	18	20	6	20
Elementary	..	..		20	17	17	23	30	29	22					21

The method of compiling the statistics for the above tables is the same as that which has been employed in the Elementary Schools ever since the commencement of the school dental scheme, and it must be recognised that, while it gives an exact representation of the prevalence of dental caries, it does not give a true representation of the benefits and advantages and influence on health of the dental scheme as carried out in elementary schools. In calculating the average number of decayed teeth per child, not only is every decayed tooth actually present in the mouth of a child counted, but also every permanent tooth which has ever been extracted or filled. The same facts must be borne in mind when considering the percentage free from caries. It may well be and very often is true that, as a result of extractions and fillings, the mouth of a child has been put into a perfectly clean and healthy condition, but for the purposes of these statistics such a child would still be counted as having a certain number of carious teeth. Even so, it will be seen that, while there is an average of 2.6 decayed teeth amongst the fee-paying children, there are only 2.1 amongst the free-placers, many of whom have quite healthy mouths; or, in other words, that dental caries amongst fee-paying children, as compared with this condition in free-placers, is 24 per cent. more prevalent.

On page 43 a statement is given in tabular form of the number of children inspected by the School Dental Officers in Secondary Schools, of the findings of these inspections, and of the number of free-placers who were actually treated by them. The following are the chief facts:—

	Fee-paying.	Free-placer.
Total No. of inspections	1317	1093
No. of children referred for treatment	633	621
No. of children actually treated .. .. .	..	423

STATISTICAL TABLES—ELEMENTARY SCHOOLS.

TABLE I.—A.—ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections—

Entrants	3901
Intermediates	4171
Leavers	2311
Total	10383

Number of other Routine Inspections .. —

B.—OTHER INSPECTIONS.

Number of Special Inspections	4388
Number of re-inspections	14214
Total	18602

TABLE II.—A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDING
31ST DECEMBER, 1930.

Defect or Disease.					Routine Inspections.		Special Inspections.		
					No. of Defects.		No. of Defects.		
					Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.	
(1)					(2)	(3)	(4)	(5)	
Malnutrition .. .. .					..	766	..	7
Uncleanliness					817	..	3	7	
Skin	Ringworm—								
	Scalp				4	..	2	..	
	Body				5	..	1	..	
	Scabies				8	..	..	..
	Impetigo				49	..	19	..	
§Eye	Other Diseases (non-tubercular)				29	..	4	..	
	Blepharitis				39	24	5	1	
	Conjunctivitis				13	..	4	..	
	Keratitis .. .. .				..	..	..	..
	Corneal Opacities .. .. .				..	..	..	..
	Defective Vision (excluding squint)				550	161	78	3	
	Squint				88	12	21	2	
	Other conditions				10	2	4	1	
	Ear	Defective Hearing				16	3	4	..
		Otitis media				48	8	9	..
Other ear diseases				2	..	..	..
Nose and Throat	Enlarged tonsils only				453	985	76	29	
	Adenoids only				62	96	8	3	
	Enlarged tonsils and adenoids				314	72	54	9	
	Other conditions				18	8	3	..	
Enlarged Cervical Glands (non-tubercular)					3	408	4	25	
Defective speech .. .. .					..	56	..	2
*Teeth, Dental Diseases					560	..	43	..	
Heart and Circulation	Heart Disease—								
	Organic				5	83	4	1	
	Functional				2	46	..	1	
Lungs	Anaemia				7	5	1	3	
	Bronchitis				40	69	1	5	
Other non-tuberculous diseases					6	15	1	3	

TABLE II.—*continued.*

Defect or Disease. (I)				Routine Inspections.		Special Inspections.	
				No. of Defects.		No. of Defects.	
				Requiring treatment. (2)	Requiring to be kept under observation, but not requiring treatment. (3)	Requiring treatment. (4)	Requiring to be kept under observation, but not requiring treatment. (5)
Tuber- culosis	Pulmonary—	Definite	3	..	I	..	
		Suspected	3	..	..	..
	Non-pulmonary—	Glands	15	..	2	..	
		Spine	2	..	..	..
		Hip	2	..	..	..
		Other bones and joints ..	3	..	..	..
		Skin .. ..	..	..	..	..
		Other forms	3	..	I	..	
Nervous system	{	Epilepsy	5	7	6	3	
		Chorea.. ..	2	I	2	..	
		Other conditions	I	I	..	..
Deform- ities	{	Rickets	54	101	2	11	
		Spinal Curvature	62	30	5	3	
		Other forms	300	117	33	9	
Other defects and diseases				176	†770	22	146‡

§ In addition there were 147 “ Routine ” and 7 “ Special ” cases of defective vision which had been corrected by glasses at the time of examination.

* This only includes the grosser cases requiring immediate treatment, others being left over for routine treatment by the School Dentist.

† Includes 603 Dull and Backward Children. ‡ Includes 115 Dull and Backward Children.

B.—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

Group. (1)	Number of Children		Percentage of children found to require treatment. (4)
	Inspected. (2)	Found to require treatment. (3)	
Code Groups :—			
Entrants	3901	755	19.4
Intermediates and other routine inspections	4171	933	22.4
Leavers	2311	512	22.2
Total (Code Groups)	10383	2200	21.2

TABLE III.—NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA ON DECEMBER 31ST, 1930.

			Boys.	Girls.	Total.
Blind (including partially blind).	(i) Suitable for training in a school or class for the totally blind.	Attending certified schools or Classes for the Blind ..	6	4	10
		Attending Public Elementary Schools .. .. .	..	..	..
		At other Institutions .. .. .	..	..	..
		At no School or Institution ..	1	1	2
	(ii) Suitable for training in a School or Class for the partially blind.	Attending certified Schools or Classes for the Blind ..	4	1	5
		Attending Public Elementary Schools	13	8	21
		At other Institutions .. .. .	..	1	1
		At no School or Institution ..	6	1	7
Deaf (including deaf and dumb and partially deaf).	(i) Suitable for training in a School or Class for the totally deaf or deaf and dumb.	Attending certified Schools or Classes for the Deaf ..	7	7	14
		Attending Public Elementary Schools	1	..	1
		At other Institutions .. .. .	..	..	..
		At no School or Institution ..	1	..	1
	(ii) Suitable for training in a School or Class for the partially deaf.	Attending certified Schools or Classes for the Deaf ..	1	1	2
		Attending Public Elementary Schools	2	3	5
		At other Institutions .. .. .	..	..	..
		At no School or Institution ..	..	..	..
Mentally Defective.	Feeble-minded (cases not notifiable to the Local Authority).	Attending certified Schools for Mentally Defective children	6	10	16
		Attending Public Elementary Schools	46	33	79
		At other Institutions .. .. .	..	..	..
		At no School or Institution ..	42	26	68
	Notified to the Local Control Authority during the year.	Feeble-minded	3	1	4
		Imbeciles	7	7	14
		Idiots .. .. .	..	1	1

			Boys.	Girls.	Total.
Epileptics.	Suffering from Severe Epilepsy.	Attending Certified Special Schools for Epileptics ..	..	2	2
		In Institutions other than Certified Schools ..	1	..	1
		Attending Public Elementary Schools ..	2	4	6
		At no School or Institution ..	4	3	7
Physically Defective.	Suffering from Epilepsy which is not severe.	Attending Public Elementary Schools ..	16	14	30
		At no School or Institution ..	7	2	9
	Infectious Pulmonary and Glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board ..	2	1	3
		At other Institutions ..	..	..	..
		At no School or Institution ..	8	9	17
	Non-infectious but active pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board ..	4	4	8
		At certified residential open-air schools ..	..	..	..
		At certified Day Open-air Schools ..	..	..	..
		At Public Elementary Schools ..	12	16	28
		At other Institutions ..	..	..	..
		At no School or Institution ..	9	10	19
	Delicate children (e.g., pre- or latent tuberculosis, malnutrition, debility, anaemia, etc.)	At certified residential Open-air Schools ..	3	1	4
		At Certified Day Open-air Schools ..	..	..	..
		At Public Elementary Schools ..	62	67	129
		At other Institutions ..	..	..	..
		At no School or Institution ..	40	25	65

			Boys.	Girls.	Total.
Physically Defective (contd.)	Active non-pulmonary tuberculosis.	At Sanatoria or Hospital Schools approved by the Ministry of Health or Board	.		
		At Public Elementary Schools	5 38	3 41	8 79
		At other Institutions	1	2	3
		At no School or Institution ..	23	14	37
	Crippled children (other than those with active tuberculous disease), <i>e.g.</i> , children suffering from paralysis, &c., and including those with severe heart disease.	At Certified Hospital Schools	7	6	13
		At Certified Residential Cripple Schools .. ..	..	2	2
		At Certified Day Cripple Schools .. ..	..	..	..
		At Public Elementary Schools	115	113	228
		At other Institutions .. ..	..	..	..
		At no School or Institution ..	52	65	117

TABLE IV.—RETURN OF DEFECTS TREATED DURING THE YEAR ENDED 31ST DECEMBER, 1930.
TREATMENT TABLE.

GROUP I.—MINOR AILMENTS.

Defect or Disease. (1)	Number of defects treated, or under treatment during the year.		
	Under the Authority's Scheme. (2)	Otherwise. (3)	Total. (4)
Skin—			
Ringworm—Scalp	63	7	70
Ringworm—Body	55	..	55
Scabies	23	2	25
Impetigo	471	5	476
Other Skin Diseases.. ..	264	18	282
Minor Eye Defects— (External and other, but excluding cases falling in Group II.)	298	40	338
Minor Ear Defects	207	22	229
Miscellaneous (<i>e.g.</i> , Minor injuries, bruises, sores, chilblains, etc.)	2237	9	2246
Total	3618	103	3721

GROUP II.—DEFECTIVE VISION AND SQUINT (excluding Minor Eye Defects treated as Minor Ailments—Group I.)

Defect or Disease.	Number of defects dealt with.			
	Under the Authority's Scheme.	Submitted to refraction by private practitioner or at Hospital apart from the Authority's Scheme.	Otherwise.	Total.
(1)	(2)	(3)	(4)	(5)
Errors of refraction (including Squint)	1290	45	25	1360
Other defect or disease of the Eye excluding those recorded in Group I.)	15	..	3	18
Total	1305	45	28	1378

Total number of children for whom spectacles were prescribed :—

(a) Under the Authority's Scheme 1023
 (b) Otherwise 62

Total number of children who obtained or received spectacles :—

(a) Under the Authority's Scheme 1013
 (b) Otherwise 61

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Number of Defects.

Received Operative Treatment.			Received other forms of Treatment.	Total number Treated.
Under the Authority's Scheme, in Clinic or Hospital.	By Private Practitioner or Hospital, apart from the Authority's Scheme.	Total.		
(1)	(2)	(3)	(4)	(5)
815	97	912	35	947

GROUP IV. DENTAL DEFECTS.
NUMBER OF CHILDREN DEALT WITH.

				AGE GROUPS INSPECTED.										Specials.	Total.	
Age	..		Under 5	5	6	7	8	9	10	11	12	13	14			
East of County (Mr. Birch)	417	890	1108	1182	1333	1444	1393	1002	889	959	100	53	10770
South of County (Mr. Keenan)	193	876	1385	1535	1615	1796	1643	1186	1044	1110	219	6	12608
North of County (Mr. Catchpole)	186	888	1278	1398	1510	1608	1563	1159	965	998	180	0	11733
Total	796	2654	3771	4115	4458	4848	4599	3347	2898	3067	499	59	35111

				No. of Children Referred for Treatment.											Specials.	Total.
				Under 5	5	6	7	8	9	10	11	12	13	14		
Age	..	..	..										
East of County	..	..	..	149	462	553	647	692	725	699	473	413	414	45	53	5325
South of County	..	..	..	36	298	616	783	885	970	879	596	415	449	97	5	6029
North of County	..	..		48	448	684	775	859	866	794	540	418	407	75	..	5914
Total	..	..		233	1208	1853	2205	2436	2561	2372	1609	1246	1270	217	58	17268

(b) Referred for Treatment	..	..	..	..	..	..	..	..	..	..	..	..	..	17268
(c) Actually treated	..	..	..	..	..	..	..	..	..	..	..	..	..	11853
(d) Re-treated (result of periodical examination)	..	..	..	..	..	..	..	..	..	..	..	..	..	7857

NUMBER OF TEMPORARY TEETH DECAYED.

Age	..	SAVEABLE.											UNSAVEABLE.										
		Un-der5	5	6	7	8	9	10	11	12	13	14	Un-der5	5	6	7	8	9	10	11	12	13	14
East of County	..	1324	3469	3160	3743	3383	3098	2334	990	458	179	11	203	933	1125	1142	1087	951	770	425	236	120	10
South of County	..	266	1555	2389	2291	2123	1756	1004	391	136	48	3	60	491	937	1151	1213	1217	891	405	197	91	9
North of County	..	126	469	608	475	312	304	207	91	33	22	0	165	1647	2165	2240	2059	1653	1185	501	201	89	14
Total	..	1716	5493	6157	6509	5818	5158	3545	1472	627	249	14	428	3071	4227	4533	4359	3821	2846	1331	634	300	33

NUMBER OF PERMANENT TEETH DECAYED.

Age	SAVEABLE.											UNSAVEABLE.										
	5	6	7	8	9	10	11	12	13	14	15	5	6	7	8	9	10	11	12	13	14	15
East of County	11	88	207	372	413	484	407	438	510	75	0	0	0	1	7	15	51	54	75	114	5	0
South of County	3	32	92	181	265	373	325	318	405	80	3	0	0	8	27	68	160	138	118	184	43	5
North of County	11	118	286	464	583	708	485	357	435	70	0	0	5	41	90	235	204	208	210	277	58	0
Total	25	238	585	1017	1261	1565	1217	1113	1350	225	3	0	5	50	124	318	415	400	403	575	106	5

PARTICULARS OF TIME GIVEN AND OPERATIONS UNDERTAKEN.

No. of Half-days devoted to Inspection.	No. of Half-days devoted to Treatment.	Total No. of Attendances made by the Children at the Clinics and Schools.	No. of Permanent Teeth		No. of Temporary Teeth.		Total No. of Fillings.	No. of Administrations of General Anaesthetics.	No. of other Operations.	
			Ex-tracted.	Filled.	Ex-tracted.	Filled.			Per-manent Teeth.	Temp-orary Teeth.
East of County. 99	324	3708	156	2093	3492	315	2454	—	2105	817
South of County. 88	338	4524	421	1176	3909	282	1472	—	1182	947
North of County. 94	293	3816	438	1800	4423	233	2185	21	1393	130
Total 281	955	12048	1015	5069	11824	830	6111	21	4680	1894

GROUP V.—UNCLEANLINESS AND VERMINOUS CONDITIONS.

- (1) Average number of visits per school made during the year by the School Nurses 8.5
- (2) Total number of examinations of children in the schools by the School Nurses 97763
- (3) Number of individual children found unclean 3135 approx.
- (4) Number of children cleaned under arrangements made by the Local Education Authority.. .. . 0
- (5) Number of cases in which legal proceedings were taken :—
- (a) Under the Education Act, 1921 0
- (b) Under School Attendance Bye-laws.. .. . 14

RETURN OF DEFECTS (SECONDARY SCHOOLS).

Defect or Disease.					Routine Inspections.		Special Inspections.	
					No. of Defects.		No. of Defects.	
					Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.
(1)					(2)	(3)	(4)	(5)
Malnutrition .. .. .					..	98	..	..
Uncleanliness					15	..	..	..
Skin	{ Ringworm—							
	{ Scalp				1	..	..	..
	{ Body .. .. .				..	..	..	..
	{ Scabies .. .. .				..	..	..	..
	{ Impetigo				1	..	..	..
{ Other diseases (non-tuberculous)					4	..	..	..
Teeth	Dental Diseases				216	..	2	..
Nose and Throat	{ Enlarged Tonsils only				53	135	..	1
	{ Adenoids only .. .. .				..	2	1	..
	{ Enlarged Tonsils and Adenoids ..				7	6	..	..
	{ Other Conditions				2	1	..	..
Enlarged Cervical Glands (non-tuberculous)					1	10	..	..
Goitre	.. .. .				10	4	..	..
Eye	{ External Eye Disease				8	3	..	..
	{ Defective Vision (including squint)				187	168	11	2
Ear	{ Defective Hearing				6	..	..	..
	{ Otitis media				12	..	..	..
	{ Other Ear Diseases .. .. .				..	..	..	..
Defective Speech .. .. .					..	7	..	..
Intelligence (backward) .. .. .					..	11	..	..
Heart and circulation					1	26	..	..
Anaemia .. .. .					..	2	..	..

Defect or Disease. (I)					Routine Inspections.		Special Inspections.	
					No. of Defects.		No. of Defects.	
					Requiring treatment. (2)	Requiring to be kept under observation, but not requiring treatment. (3)	Requiring treatment. (4)	Requiring to be kept under observation, but not requiring treatment. (5)
Tuber- culosis	Pulmonary—	Definite	..	..	..	..	..	..
		Suspected	..	..	..	..	..	..
	Non-pulmonary—	Glands..	..	..	2	1	..	..
		Spine	..	..	..	..	..	..
		Hip	..	..	..	..	..	..
		Other Bones and Joints	..	..	..	..	..	..
		Skin	..	..	..	..	..	..
		Other forms	..	..	..	..	..	..
Lungs	Bronchitis	..	..	..	1	..	..
	Other non-tuberculous diseases	..	..	..	3	..	..
Nervous System	{	Headache	..	..	..	1	..	..
		Signs of Overstrain	..	..	..	1	..	..
Rheumatism	{	Chorea	..	..	..	1	..	..
			..	..	2	5	..	..
Digestion	{		..	..	1	..	..	..
			..	..	10	44	..	..
Deform- ities	{	Spinal Curvature	..	..	43	114	2	..
		Flat Foot	..	..	8	13	..	..
		Other Deformity	..	..	23	19	1	1
Other Defects					..	..	..	..
Remedial Exercises advised					..	..	135	
Number of individual children found at Routine Inspection to require treat- ment					..	..	..	..
					343		0	

DENTAL INSPECTION OF SECONDARY SCHOOL CHILDREN.

			Age Groups Inspected.											Total.	
			7 and un- der.	8	9	10	11	12	13	14	15	16	17		18 and over
Age	..	..											
Fee-paying	..	..	47	32	45	80	107	187	218	237	203	99	44	18	1317
Free-place	..	..	..	..	..	50	128	163	197	193	177	103	60	22	1093
Total	..	..	47	32	45	130	235	350	415	430	380	202	104	40	2410

			No. of Scholars referred for treatment.												Total.
			7 and un- der.	8	9	10	11	12	13	14	15	16	17	18 and over	
Age	..	..											
Fee-paying	..	..	27	16	25	34	51	92	103	117	103	38	18	9	633
Free-place	..	..	..	..	..	27	62	77	110	117	110	68	36	14	621*
Total	..	..	27	16	25	61	113	169	213	234	213	106	54	23	1254

*Actually treated (Free-place) 423

PARTICULARS OF TIME GIVEN AND OPERATIONS UNDERTAKEN (SECONDARY SCHOOLS).

No. of Half-days devoted to Inspection.	No. of Half-days devoted to Treatment.	Total No. of Attendances made by the Children at the Clinics and Schools.	No. of Permanent Teeth		No. of Temporary Teeth		Total No. of Fillings.	No. of Administrations of General Anaesthetics.	No. of other Operations.	
			Ex-tracted.	Filled.	Ex-tracted.	Filled.			Per-manent Teeth.	Temp-orary Teeth
otal 27	53	449	198	361	96	4	365	9	375	11

